



Young Consumers

Effects of credit card usage on young Brazilians' compulsive buying

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Effects of credit card usage on young Brazilians' compulsive buying

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Abstract

Purpose – The purpose of this study is to assess the moderating and mediating roles of credit card usage in the relationship between money attitudes (i.e. power-prestige, retention-time, distrust and anxiety) and compulsive buying behaviour.

Design/methodology/approach – The research design comprised a cross-sectional survey and two focus-group interviews. A structured questionnaire was completed by 365 young credit card users in São Paulo in Brazil, and two focus group discussions were conducted comprising six participants each.

Findings – Results showed that misuse of credit cards significantly increased compulsive buying among individuals with high levels of anxiety. Credit card usage partially mediates the relationship between compulsive buying and three variables established in the literature: power-prestige, retention-time and anxiety. Credit card usage did not significantly mediate the effect of distrust (or price sensitivity) on compulsive buying behaviour. Respondents' price sensitivity did not by itself reduce levels of usage, though it did have an effect on overspending in conjunction with the other factors studied. The key themes that emerged from the focus-group interviews enhanced the survey's results with greater in-depth understanding.

Originality/value – This study was the first to compare the moderating and mediating effects among the four elements of money attitudes and compulsive buying behaviour. It addresses the issue of financial literacy, money management and overspending – a special concern for today's emerging economies – in a Brazil, Russia, India and China (BRIC) country.

Keywords Young consumers, Brazil, Compulsive buying, Credit card usage, Money attitudes

Paper type Research Paper

Introduction

Compulsive buying behaviour has been defined by O'Guinn and Faber (1989, p. 155) as a "chronic, repetitive" form of purchasing in response to negative feelings and events. D'Astous (1990) describes it as a generalised urge to buy while Brougham *et al.* (2011) speak more strongly of the inability to control purchasing behaviour. More comprehensively, McElroy *et al.* (1994) describe it as a maladaptive preoccupation with shopping which leads to irresistible impulses to buy items that are not needed and cannot be afforded, often frequently, causing distress and financial problems which interfere with social and occupational life. A mild form of such behaviour would be a 'shopping spree', while the other end of the scale is characterised by serious patterns of overspending (Wansink, 1994). Researchers and policy makers have looked with special concern into the nature of its impact on young consumers (D'Astous *et al.*, 1990; Hassay and Smith, 1996; DeSarbo and Edwards, 1996; Gwin *et al.*, 2005; Roberts *et al.*, 2006; Trautmann-Attmann and Johnson, 2009). This concern is justified, as young people are still in the process of developing spending habits and can carry them, whether good or bad, into later life. Moreover, empirical evidence has shown that young consumers are more prone to compulsive buying than their elders (Dittmar, 2005). Though the behaviour generally starts in late adolescence or the early 20s, it is seldom recognised as a problem until much later (Faber, 2011). The study reported in this paper drew upon the dark side of the consumer

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behaviour literature to explore compulsive buying behaviour and the way in which it relates to both credit card usage and attitudes towards money in a young population.

Financial illiteracy may result in hazardous consequences for a society, which is a special concern for today's emerging economies. That is the reason for recent calls for studies addressing compulsive buying and money attitudes in such milieus, for example, by [Bonsu \(2008\)](#) and [Phau and Woo \(2008\)](#). Brazil in particular has attracted attention in the literature on account of its sheer size in terms of population and economy. It is currently experiencing a consumption boom, the act of shopping having become more important to consumers than ever before, which has led to a serious concern on the part of policy-makers about how wisely Brazilians, especially the young, are spending their money. A survey conducted by the Brazilian Association of Credit Card Services in 2012 shows that the expansion of the access to credit cards, driven by recent Brazilian economic growth, is greater among the 17-24-year-old consumer population. The promising current socio-economic development of the BRICs makes the issue of overspending and money management in this age group critically important for investigation.

Conceptual framework and research hypotheses

Credit card usage and attitudes towards money

Properly used, credit cards can provide financial security and flexibility, but their uncontrolled use exposes the user to serious financial risk. An important stream of psychological research dealing with credit cards as a trigger of spending behaviour has its basis in the experimental study of [Feinberg \(1986\)](#), who showed that credit card stimuli increase the magnitude, probability and speed of spending. [Feinberg \(1990\)](#) claims that the results of studies which have not supported ([Hunt et al., 1990](#)) or only partially supported ([Feinberg and Meoli, 1987](#); [Shimp and Moody, 2000](#)) the credit card effect could be attributed to the various social and historical contexts in which they were undertaken. It is generally agreed that possession of a credit card is directly associated with overspending because it creates an illusion of income and spending capacity which real money does not, making it more difficult to control personal cash flow. [Norvilitis et al. \(2006\)](#) reported that credit card owners' total indebtedness was at that time around 35 per cent higher than it was for those who did not use them. A study of college students in four of the Southern States of the USA by [Hayhoe et al. \(2005\)](#) found that young credit card holders accord more importance than their non-user counterparts to money as a symbol of power and are less well informed about the management of credit card debt.

Indebtedness and even bankruptcy are the inescapable financial consequences of compulsive buyers' general attitudes towards money and, specifically, the irresponsible use of credit cards as a means of financing their compulsion. Pioneering research by [Yamauchi and Templer \(1982\)](#) developed a standard measure of how people view and evaluate money, the Money Attitude Scale (MAS), a description of which is included in the [Appendix](#). It comprises four separate components of the attitude measured: "power-prestige", relating to the use of money to those ends; "retention-time", referring to long-term investments aimed at financial security; "distrust", specifically with respect to money matters, also described as price sensibility; and "anxiety" originating in money-related episodes. [Bhardwaj and Bhattacharjee \(2010\)](#) found that power-prestige and anxiety were motives that eventually resulted in uptake of loan facilities, and could be predictors of financial default.

There is empirical support for the assumption that the misuse of credit cards is a function of compulsive buying behaviour. [Norum \(2008\)](#) found such behaviour to be closely associated with irresponsible use of credit cards. A study of college students by [Wang and Xiao \(2009\)](#) showed that those who had a greater tendency to compulsive buying behaviour were more likely to accumulate credit card debt, while [Magee \(1994\)](#) had earlier found that the higher the level of such behaviour the more likely that credit cards would be used for purchases.

Moderation and mediation

The literature has yet to make it clearer exactly what role credit card usage plays in the relationship between attitudes towards money and compulsive buying behaviour, and how these variables might be interpreted within a single theoretical model. If the use of credit cards is conceptualised as a moderator of purchasing behaviour, then money attitudes would be expected to increase the likelihood of compulsive buying only among those whose usage is irresponsible. A seminal study by Roberts and Jones (2001) provided evidence for that moderating role of the use of a credit card in the relationship between compulsive buying and three of the specific attitudes towards money defined by Yamauchi and Templer (1982): power-prestige, distrust and anxiety. On the other hand, if credit card usage is taken to be a mediator, it is to be expected that money attitudes will increase misuse, which will in turn increase the likelihood of such buying behaviour.

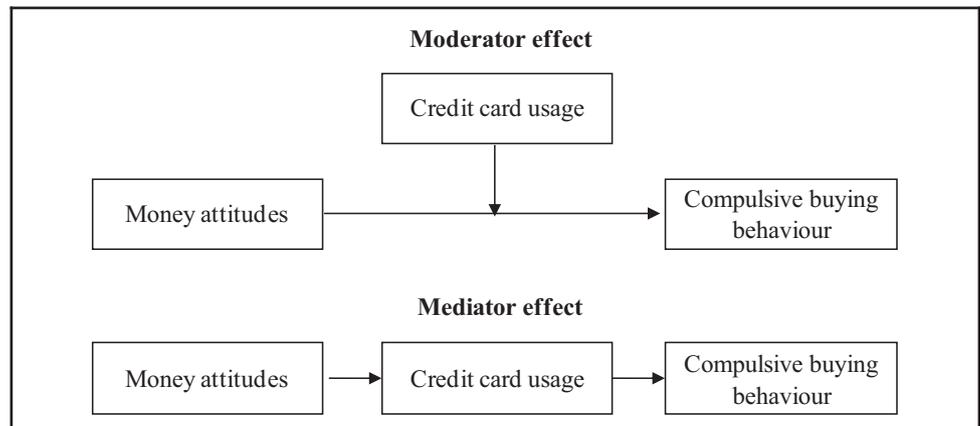
More recently, Joireman *et al.* (2010) have found that compulsive buying tendencies mediate the link between consideration of future consequences and credit card debt. The latest contribution, at the time of writing, to the understanding of how compulsive buying develops from credit card usage has been made by Palan *et al.* (2011), who found that the relationship with compulsive buying was mediated by credit card misuse only in the case of one variable, power-prestige, and in that case only partially.

Figure 1 illustrates the moderating and mediating roles of credit card usage in the relationship between attitudes towards money and compulsive buying behaviour.

To the best of the authors' knowledge, no published study has yet tested the mediating effect of the use of credit cards on the relationship between the four elements of the MAS and compulsive buying behaviour or compared the moderating and mediating effects among these variables. The empirical study reported in this paper therefore tested following distinct models of the relationship.

- Model 1: The "independent effects model", tests whether or not power-prestige, retention-time, distrust, anxiety and credit card usage relate significantly to compulsive buying behaviour, and is expressed in *H1* and *H2*.
- Model 2: The "moderation model", tests the extent to which credit card usage moderates the relationship between money attitudes and compulsive buying behaviour, and is expressed in *H3*.
- Model 3: The "mediation model", tests whether credit card usage significantly moderates that same relationship, and is expressed in *H4*.

Figure 1 Credit card use as a moderator and mediator



Research hypotheses

- H1. Power-prestige (H1a) and anxiety (H1b) will significantly increase compulsive buying behaviour, whereas retention-time (H1c) and distrust (H1d) will significantly decrease it.
- H2. Credit card usage will significantly increase compulsive buying behaviour.
- H3. Credit card usage significantly moderates the relationship between power-prestige and compulsive buying behaviour (H3a), retention-time and compulsive buying behaviour (H3b), distrust and compulsive buying behaviour (H3c) and anxiety and compulsive buying behaviour (H3d).
- H4. Credit card usage significantly mediates the relationship between power-prestige and compulsive buying behaviour (H4a), retention-time and compulsive buying behaviour (H4b), distrust and compulsive buying behaviour (H4c) and anxiety and compulsive buying behaviour (H4d).

Methodology

This two-part research study comprised one quantitative and one qualitative element. In the first, scaled data were collected by structured questionnaire from 226 male and 139 female undergraduate students between 17 and 24 years of age, enrolled in three large higher-education institutions in the city of São Paulo, Brazil. The students enrolled in these institutions could be expected to possess their own credit cards, as their families have greater acquisitive power than the general population. They were recruited via specific online communities related to the higher-education institutions chosen. The second consisted of two focus groups containing six participants each, drawn from the same sampling frame as the first. All respondents and participants resided in the city and were holders of at least one credit card.

Questionnaire

Three established measuring instruments contributed to the design of the survey questionnaire. They are described in detail in the Appendix. The first was the Diagnostic Screener for Compulsive Buying (DSCB) developed by Faber and O'Guinn (1992). A formula, applied to responses on 5-point Likert scales to the seven statements comprising the DSCB, classifies respondents as compulsive buyers if their mean score is < -1.34 . Four alternative scales have subsequently been proposed by DeSarbo and Edwards (1996), Monahan *et al.* (1996), Lejoyeux *et al.* (1997) and Ridgway *et al.* (2008), but it has been asserted by Cole and Sherrell (1995) that the DSCB has a broader applicability to general consumer populations and by Ridgway *et al.* (2008) that it can identify lower levels of compulsive buying behaviour. It has been more widely used in published studies, according to Kwak *et al.* (2003) and Manolis and Roberts (2008). For those reasons, it was preferred to the others for the study reported here.

The second measuring instrument was the MAS devised by Yamauchi and Templer (1982), the 29 items of which measure power-prestige (nine items), retention-time (seven), distrust (seven) and anxiety (six). The MAS has shown satisfactory psychometric properties for internal consistency and test-retest reliabilities and nomological validity. Baker and Hagedorn (2008) showed the superiority of MAS to another widely used measure of attitude towards money – Furnham's Money Beliefs and Behaviour Scale (1984). Testing both scales together produced a reliable solution nearly equal to that of the MAS alone.

Finally, five items from the Credit Card Usage (CCU) scale devised by Roberts and Jones (2001) were added to the questionnaire, to assess how responsibly participants used their credit cards by reference to their scores on the corresponding 5-point Likert scales. Students who had agreed to take part in the survey were provided with a hyperlink to an online self-completion questionnaire. The outcome was that 365 usable questionnaires were available for analysis.

Focus groups

Two focus group discussions were conducted as a means to enhance the survey results with more in-depth understanding of the role of credit cards and the attitudes towards spending and overspending among the student-age participants in the study. Each group comprised six students from the same source as the questionnaire respondents, one facilitator and one observer who took notes and audio-recorded the discussions. All participants gave their written consent to take part in a discussion. Each discussion lasted about an hour and a half. A previously prepared protocol was used to guide the discussion. Participants were first invited to describe their buying behaviour in general and the situations in which they used their credit cards. They were then encouraged to discuss their views on credit cards and the circumstances in which they thought young people like themselves most often use them. The focus group process encouraged them to reveal their attitudes towards money, including the idea of buying things to impress others, the need to save money, price sensitivity and going shopping as recreation or a solution to negative life experiences. The group discussions were transcribed verbatim, and translated into English by a professional translator who was a native speaker.

Results

Demographic profile of the respondents

The survey sample of 365 individuals was 61.9 per cent male and 38.1 per cent female, with an average age of just under 19 years ($SD = 1.42$) – in comparison to the Brazilian general population, the sample was more highly educated, whiter and had a higher income. Of that total, 27 were classified as compulsive buyers by the criterion of a score < 1.34 in the 5-point DSCB scale described in the Appendix. That sub-sample comprised 20 young women and 7 young men whose average age was only six days different from that of the whole sample. Almost three quarters (70.4 per cent) of the compulsive buyers held at least 2 credit cards, whereas more than half (56.6 per cent) of the total survey sample had only one. Both of the focus groups comprised three male and three female participants, possessing an average of one and a half credit cards each (1.58 ; $SD = 0.67$). The average age was marginally higher than that of the sample as a whole, at 20 years 7 days.

Scale dimensionality and reliability

Principal component analysis was used to test the scale dimensionality of each theoretical construct. The factor loading for item 7 in the Appendix (“Made only the minimum payments on my credit cards”) was low, and it was duly deleted from the DSCB scale to improve internal consistency. All 37 of the remaining items were retained on the strength that the Cronbach’s alpha coefficients were all > 0.60 , considered acceptable for use in research studies (Roberts, 2009, p. 387). The values for the three subsets of the MAS were power-prestige 0.79 ($M = 4.09$; $SD = 0.67$), retention-time 0.81 ($M = 2.72$; $SD = 0.83$), distrust 0.70 ($M = 2.67$; $SD = 0.64$) and anxiety 0.68 ($M = 3.18$; $SD = 0.75$). For the the DSCB scale, the alpha score was 0.68 ($M = 4.06$; $SD = 0.67$) and for the CCU scale, 0.74 ($M = 3.52$; $SD = 0.89$).

Model 1: Independent effects of money attitudes and credit card usage

The effect of respondents’ attitudes to money on compulsive buying behaviour was found to be significant with respect to the power-prestige, retention-time, distrust and anxiety variables. Anxiety emerged as the strongest determinant ($\beta = 0.54$, $p < 0.0001$), followed by retention-time ($\beta = -0.26$, $p < 0.0001$). Table I shows that the four components of money attitudes collectively explained 42.9 per cent of the variance in compulsive buying behaviour, providing strong support for *H1a*, *H1b*, *H1c* and *H1d*. Credit card usage also exhibited a significant determinant effect, increasing the adjusted R^2 to 46.6 per cent. *H2a* and *H2b* are therefore also supported.

Table I Results for model 1: independent effects

<i>Dependent variable: compulsive buying behaviour</i>	<i>H1a-d</i>		<i>H2a-b</i>	
	β	<i>Sig.</i>	β	<i>Sig.</i>
<i>Independent variables:</i>				
Power-prestige	0.12	0.006	0.08	0.057
Retention-time	-0.26	0.000	-0.20	0.000
Distrust	-0.13	0.003	-0.13	0.001
Anxiety	0.54	0.000	0.49	0.000
Credit card usage			0.22	0.000
ANOVA coefficients	$F(4, 357) = 68.7$	0.000	$F(5, 356) = 63.9$	0.000
Adjusted R^2	0.429		0.466	

Note: $N = 365$ responses

Model 2: The moderating effect of credit card usage

Model 2 was tested by multiple regression in accordance with the seminal methodology developed by Aiken and West (1991) for analysis of moderation effects. Interaction terms were formed by the product of the credit card usage variable and each of the four components of money attitudes, after transforming them into a centred variable. The absence of multicollinearity was confirmed by the values of the variance inflation factor being well below 5 (De Vaus, 2002). Table II shows that regression analysis found the only significant interaction effect to be between anxiety and credit card usage ($\beta = -0.12$, adj. $\Delta R^2 = 0.006$, $\Delta F = 27.1$, $p < 0.05$). $H3d$ is thus supported, but $H3a$, $H3b$ and $H3c$ are rejected.

Simple slope analysis was used to interpret the nature of this interaction, as advocated by Aiken and West (1991). Figure 2 demonstrates the relationship between anxiety and compulsive buying behaviour with credit card usage. The moderating effect of the latter was more closely linked to an increased compulsive buying among respondents who scored higher on the anxiety dimension than among those whose scores were lower. That relationship is strongest when usage of credit cards is high and weakest when it is low. There was a considerable difference in the degree of compulsive buying behaviour according to the level of credit card usage in the low-anxiety condition but not in the high-anxiety alternative.

Model 3: The mediating effect of credit card usage

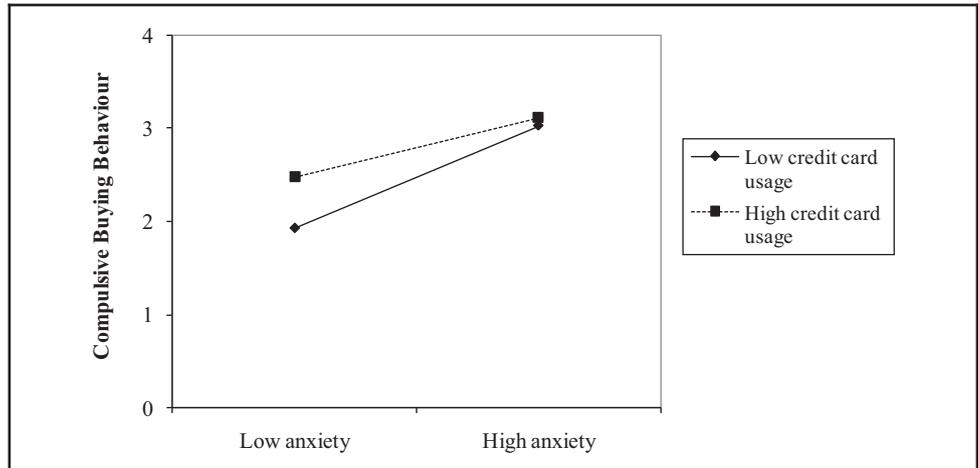
The testing of Model 3 applied the four criteria for the presence of a mediating effect set out in a pioneering methodological work by Baron and Kenny (1986). Those are that there

Table II Results for model 2: moderation effects

<i>Dependent variable: compulsive buying behaviour</i>	β	<i>Sig.</i>
<i>Independent variables:</i>		
Power-prestige	0.08	0.052
Retention-time	-0.19	0.000
Distrust	-0.14	0.001
Anxiety	0.49	0.000
Credit card usage	0.22	0.000
<i>Interaction terms:</i>		
Power-prestige x credit card usage	0.03	0.443
Retention-time x credit card usage	-0.01	0.884
Distrust x credit card usage	0.048	0.246
Anxiety x credit card usage	-0.12	0.006
ANOVA coefficients	$F(9, 352) = 36.8$	0.000
Adjusted R^2	0.472	

Note: $N = 365$ responses

Figure 2 Simple regression slopes of compulsive buying behaviour on anxiety for low and high levels of credit card usage



should be direct significant relationship between the independent variable and the mediator, between the independent variable and the dependent variable and between the mediator and the dependent variable; and that, when the mediator enters the regression model, it should considerably weaken (partial mediation) or fully eliminate (full mediation) the effect of the independent variable on the dependent variable.

With regard to the first mediation criterion, regression analysis found a significant direct relationship between credit card usage and power-prestige [$F(1, 361) = 29.58, p < 0.0001, \text{adj. } R^2 = 0.07$], retention-time [$F(1, 363) = 37.70, p < 0.0001, \text{adj. } R^2 = 0.09$] and anxiety [$F(1, 363) = 38.01, p < 0.0001, \text{adj. } R^2 = 0.09$]. Testing against the second criterion also demonstrated a significant direct relationship between compulsive buying behaviour and power-prestige [$F(1, 360) = 36.43, p < 0.0001, \text{adj. } R^2 = 0.09$], retention-time [$F(1, 362) = 46.18, p < 0.0001, \text{adj. } R^2 = 0.11$] and anxiety [$F(1, 362) = 172.50, p < 0.0001, \text{adj. } R^2 = 0.32$]. A non-significant relationship was found between distrust and credit card usage [$F(1, 363) = 0.28, p = 0.595, \text{adj. } R^2 = -0.002$] and distrust and compulsive buying behaviour [$F(1, 362) = 1.09, p = 0.298, \text{adj. } R^2 = 0.0002$], which requires the rejection of *H4c*. In the case of the third mediation criterion, regression analysis found the relationship between credit card usage and compulsive buying behaviour to be significant [$F(1, 362) = 91.45, p < 0.0001, \text{adj. } R^2 = 0.20$].

Regarding the fourth criterion, compulsive buying behaviour was regressed on power-prestige and credit card usage. The result [$F(2, 359) = 56.83, p < 0.0001, \text{adj. } R^2 = 0.24$] shows that both power-prestige [$\beta = 0.19, p < 0.0001$] and credit card usage [$\beta = 0.40, p < 0.0001$] made a significant contribution to the explanation of respondents' compulsive buying behaviour. When regressed on retention-time and credit card usage [$F(2, 361) = 58.82, p < 0.0001, \text{adj. } R^2 = 0.25$], both variables were found to contribute significantly to the explanation of the behaviour at ($\beta = -0.22, p < 0.0001$) and ($\beta = 0.38, p < 0.0001$), respectively. When compulsive buying behaviour was lastly regressed on anxiety and credit card usage [$F(2, 361) = 122.41, p < 0.0001, \text{adj. } R^2 = 0.40$], both were again found to make a significant contribution to the explanation, at ($\beta = 0.47, p < 0.0001$) for the former and ($\beta = 0.30, p < 0.0001$) for the latter.

The inclusion of credit card usage in the regression models weakened the relationship between money attitudes and compulsive buying behaviour, β_{PP-CB} changing from 0.30 to 0.19, β_{RT-CB} from -0.34 to -0.22 and β_{ANX-CB} from 0.57 to 0.47 (where PP is power-prestige, RT is retention-time, ANX is anxiety and CB is compulsive buying). These results attest to the mediation effect. Sobel tests confirmed that credit card usage partially mediated the relationships between compulsive buying behaviour and power-prestige ($t =$

4.54, $p < 0.0001$) and retention-time ($t = -4.83$, $p < 0.0001$) and anxiety ($t = 4.64$, $p < 0.0001$). *H4a*, *4b*, and *4d* are thus supported.

Discussion

The study reported here examined how personal attitudes to money and the possession of credit cards affected compulsive buying behaviour among young consumers in an important but under-researched market, Brazil, the world's fifth most populous country and eighth-largest economy in 2012.

It tested the interactions between credit card usage and four other independent variables: power-prestige, retention-time, distrust and anxiety. Of these, only the last accounted significantly for observed variability in the dependent variable, compulsive buying behaviour, as both mediator and moderator of the relationship between individuals' compulsive buying and their anxiety levels. There was a clear tendency for misuse of credit cards to be greater when anxiety was higher, an interaction which in turn fostered overspending.

Three selected excerpts from the focus group discussions show how the act of buying could be seen as a way of reducing the level of general anxiety engendered by worries, uncertainties, apprehension or sorrow:

When I'm feeling sad, I buy a CD, come home and listen to it. I didn't need to buy it, but it helped me to get over that moment. It can't be just anything: for example, a sweater [. . .] It has to be something that provides an experience that will lift you out of the doldrums. (Female, 18, two credit cards).

It has happened that the act of shopping brought me relief from feeling down. (Female, 20, two credit cards).

There have been a few times. I've been in situations in which I was sad and went out shopping. (Female, 21, one credit card).

When these young people attest that they buy to "get over a moment", to obtain "relief from feeling down" or because they were "sad", they invariably stress the role of anxiety in triggering spending behaviour. As the survey's results show, anxiety and credit card act together to enhance overspending (i.e. Anxiety → Credit Card → Compulsive Buying) and probably this overspending leads to further deepening of the levels of anxiety. An illustration of this post-buying anxiety is the 20-year-old female's statement: "I'm the victim of self-inflicted torture, thinking what I could have done with that \$60 which I threw away". The credit card acts as a facilitator in this vicious circle in which anxiety leads to overspending and overspending leads to still greater anxiety. A 20-year-old girl declares that she buys beyond her means when she uses the credit card: "I realise that when I buy something unnecessarily, I usually pay for it by credit card".

As hypothesized, compulsive buying behaviour was indirectly affected by power-prestige via the partial mediation of the credit card. That is, the need to impress can lead to credit card misuse and thus to overspending. The literature has found compulsive buying to be positively associated with personal goals emphasizing financial success and attractiveness to others. Four more verbatim extracts from the focus group discussions show how the concern to impress others can give rise to excessive and unnecessary purchases.

I've never bought stuff, really, thinking that tomorrow I'll get to college and bowl my mates over [. . .] I see if I like the stuff, and then if it's to my taste, I buy it and not just to impress anyone. (Male, 19, one credit card).

Yes [. . .] for example, I don't buy anything for myself thinking about the impression it will create but, on the other hand, when I buy a gift for someone I have to think about it, because I know

that, for them, it matters. So, when it's for others, I end up thinking I have to buy something that will in fact impress. (Female, 20, two credit cards).

I experienced a situation this week when a friend was talking to her mother on the phone and was begging her to buy her a car and it could not be the one the mother wanted, but an expensive one! (Female, 20, two credit cards).

I've also witnessed a situation like that, where a younger sister of a friend of mine, I think she must have been about 14 years old, was saying she needed a fancier bag to make her conspicuous at school. (Male, 20, one credit card).

This discussion reveals the motives that lie behind a purchase, related to the need to obtain others' recognition ("when it's for others I have to buy something to impress"). Despite the initial resistance of participants to the idea that decision making is often guided by status, they end up reporting situations in which young people were clearly concerned with their self-image in the group. For example, the 14-year-old girl coveted the bag to flaunt it before her classmates. The need for self-assertion in the face of others' reactions can become so extreme that even a new car, an object commonly desired by young people, may be insufficient to foster feelings of belonging ("it could not be the one the mother wanted, but an expensive one!"). Another example is illustrated in the following dialogue:

There are certain products that confer status and people only buy them to gain prestige. (Male, 19, one credit card).

This mainly relates to something that is fashionable as, because everyone has it, you also want it. And sometimes you want something better than what others possess, to show off. (Female, 20, two credit cards).

I think many people end up buying to gain acceptance by a group. (Male, 24, three credit cards).

The idea of gaining acceptance by a group goes beyond just imitating what the majority do and creates a competitive desire to succeed in achieving a unique position in the group and calling attention to oneself ('sometimes you want something better than what others possess, to show off'). The credit card itself is also considered an object of prestige. A 20-year-old girl declared: "A credit card gives you greater prestige than just cash". And a 21-year-old friend of hers added: "I agree. I've just had friends who checked to see if my card was Gold or Premium", pointing out that the type of card, its annual subscription and credit limits also weigh in determining the social status within the group. As the quantitative part of this study shows, young people who want to impress use the credit card to achieve this. Expenditure with such a purpose can get out of control (i.e. Power-Prestige → Credit Card Usage → Compulsive Consumption), especially when the urge to show off exceeds the apprehension of how eventually one may pay the bill.

The inclusion of retention-time in the model of compulsive buying behaviour proved to be important, as the statistical results were consistent with the mediating hypothesis: that credit card usage is a partial mediator in the relationship between cautious financial planning and compulsive buying (i.e. Retention-time → Credit Card Usage → Compulsive Consumption). How responsibly respondents spent their money thus affected the compulsion to buy: the more they planned their budget and the more they were concerned about their financial future, the less they misused their credit cards and the less compulsive their buying behaviour. This is consistent with a study by [Brougham et al. \(2011\)](#), which found that college students who looked to the future and felt personally responsible for paying their own debts reported lower levels of compulsive buying than others. The practical difficulty of establishing a financial plan when using a credit card was clearly expressed in the focus groups:

I end up saving money when I have hard cash, but of course I can't do that with a credit card. That's because the cash is in my hand, but when I use the card, there's nothing there to save. (Female, 18, two credit cards).

I agree [. . .] it is very easy to lose control without realizing it when you have a credit card. (Female, 20, one credit card).

The credit card makes control of spending more difficult, as it "gives you the feeling that you are never without money" (Male, 21, two credit cards). The testimony of this 21-year-old male summarises the reasoning of those who are cautious about using the credit card: "In my opinion, the card is made for you to lose track of your debts and you end up with a big hole in your bank account".

Contrary to what had initially been predicted on the basis of the literature review, credit card usage was not found to play a significant role in mediating the relationship between distrust and compulsive buying behaviour. Respondents' price sensitivity did not by itself lead to lower levels of usage, though it did have an effect on overspending in conjunction with other money attitudes. As Table I shows, the higher the level of distrust, the lower the incidence of compulsive buying.

Managerial implications

The mediation model applied in this study showed that three attitudes towards money (power-prestige, retention-time and anxiety) are responsible for the behavioural outcomes of credit card misuse and consequently, of compulsive buying. That being so, public policy interventions targeted at young people should focus particularly on changing those three components of money attitudes to diminish compulsiveness in buying behaviour, for example, by awareness-building campaigns. Those could specifically address materialistic attitudes, overvaluation of the status attached to money, the pursuit of power and prestige through acquisition and the anxiety resulting from looking to consumer goods as compensation for frustrations in other areas of life. Consumer well-being in monetary matters calls for educational practices that teach the young how to structure their financial planning. Private-public partnership initiatives could act in this direction, for example by training college students to instruct high school students, or members of neighbourhood and community associations in wiser use of their money and better planning of their spending. This could be an interesting way to counsel young people because, by teaching, they reinforce their own learning of the message of sensible spending, at the same time as helping to spread that message.

The moderation model suggests specific interventions directed at young credit card owners who are anxious about their spending. Given that anxiety affects compulsive buying among misusers of credit card in particular, those should precisely target the usage of credit in such a way as to avoid financial negligence and overspending. Simple measures could be taken, for example, by establishing spending limits for monthly expenditures on the card in such a way that the owner could not buy more than the card limit permitted. There is an urgent need for public policies that promote responsible consumption. A good benchmark is the Credit Card Responsibility and Disclosure Act of 2009, a federal statute in the USA applying a minimum age limit of 21 years for access to credit cards, requiring disclosure of agreements for marketing credit cards on university campuses, and requiring the credit card issuers to be transparent with regard to their fees and to provide clear information on terms and conditions.

Limitations and directions for future research

Intriguing and important issues relating to compulsive buying behaviour remain to be addressed. Caution is required when interpreting the directions of the relationships between the variables in the tested models, as this study did not have the longitudinal design that is essential for determining the direction of causality. Furthermore, the

self-reporting measures used in this study could beneficially be replaced with more objective alternatives in future research. Qualitative extensions of the methodology are needed for a fuller understanding of the phenomena investigated, especially with regard to the symbolism of the act of shopping for young consumers, of which there were strong hints in the focus group discussions. Patterns of compulsive buying could be studied with respect to gender, specific retail environments and product categories, such as clothing, cosmetics or IT devices. While Brazilian young people with a wealthier background possess credit cards of their own, many in the working classes still do not, which automatically disqualified them for this project. Members of the working classes in Brazil have their own special ways of dealing with credit cards (e.g. sometimes two or more friends or family members share the same card). The study of how this new working class use their credit cards and organise themselves financially into groups is promising ground for future research. Finally, it is clearly desirable to extend the informant base beyond Brazil, in order to be able to make generalisations that are useful for international marketers.

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Further reading

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Appendix

Table A1 Measurement scales used in the questionnaire

DSCB (Faber and O'Guinn, 1992)

- 1 If I have any money left at the end of the pay period, I just have to spend it
- 2 Felt others would be horrified if they knew of my spending habits
- 3 Bought things even though I couldn't afford them
- 4 Wrote a cheque when I knew I didn't have enough money in the bank to cover it
- 5 Bought myself something in order to make myself feel better
- 6 Felt anxious or nervous on days I didn't go shopping
- 7 Made only the minimum payments on my credit card. (Item excluded during scale testing.)

MAS (Yamauchi and Templer, 1982)

Power-prestige

- 8 I use money to influence other people to do things for me
- 9 I must admit that I purchase things because I know they will impress others
- 10 In all honesty, I own nice things in order to impress others
- 11 I behave as if money were the ultimate symbol of success
- 12 I must admit that I sometimes boast about how much money I make
- 13 People I know tell me that I place too much emphasis on the amount of money a person has as a sign of his or her success
- 14 I seem to find that I show more respect to people with more money than I have
- 15 Although I should judge the success of people by their deeds, I am more influenced by the amount of money they have
- 16 I often try to find out if other people make more money than I do

Retention-time

- 17 I do financial planning for the future
- 18 I put money aside on a regular basis for the future
- 19 I prepare now for my old age
- 20 I keep track of my money
- 21 I follow a careful financial budget
- 22 I am very prudent with money
- 23 I have money available in the event of another economic depression

Distrust

- 24 I argue or complain about the cost of things I buy
- 25 It bothers me when I discover I could have got something for less elsewhere
- 26 After buying something, I wonder if I could have got the same for less elsewhere
- 27 I automatically say, 'I can't afford it', whether I can or not
- 28 When I buy something, I complain about the price I paid
- 29 I hesitate to spend money, even on necessities.
- 30 When I make a major purchase, I have the suspicion that I have been taken advantage of

Anxiety

- 31 It's hard for me to pass up a bargain
- 32 I am bothered when I have to pass up a sale
- 33 I spend money to make myself feel better
- 34 I show signs of nervousness when I don't have enough money
- 35 I show worrisome behaviour when it comes to money
- 36 I worry that I will not be financially secure

CCU (Roberts and Jones, 2001)

- 37 My credit cards are usually at their maximum credit limit
- 38 I frequently use the available credit on one credit card to make a payment on another credit card
- 39 I am less concerned with the price of a product when I use a credit card
- 40 I am more impulsive when I shop with credit cards
- 41 I spend more money when I use a credit card

Notes: All item statements were rated on a 5-point Likert scale, anchored at strongly agree = 1 and strongly disagree = 5 or at very often = 1 and never = 5, according to the wording of the statement; The DSCB formula for calculating compulsive buying behaviour from the Likert scores is: $-9.69 + (\text{item } 1 \times 0.33) + (\text{item } 2 \times 0.34) + (\text{item } 3 \times 0.50) + (\text{item } 4 \times 0.47) + (\text{item } 5 \times 0.33) + (\text{item } 6 \times 0.38) + (\text{item } 7 \times 0.31)$. Individuals with scores lower than -1.34 are classified as compulsive buyers

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